

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Animal Abstract

Element Code: AMAFD01053

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Perognathus amplus cineris*

COMMON NAME: Wupatki Arizona Pocket Mouse, Wupatki Pocket Mouse

SYNONYMS: *Perognathus amplus ammodytes*

FAMILY: Heteromyidae

AUTHOR, PLACE OF PUBLICATION: Benson, Proc. Biol. Soc. Washington, 46:109, April 27, 1933.

TYPE LOCALITY: Near Wupatki Ruins, Wupatki National Monument, 27 mi. Northeast Flagstaff, Coconino County, Arizona.

TYPE SPECIMEN: Male adult. Museum of Vertebrate Zoology (55771)

TAXONOMIC UNIQUENESS: *Perognathus amplus* is 1 of 25 species in genus found in North America, and 1 of 10 species in the genus found in Arizona. *P.a. cineris* is 1 of 7 subspecies that have been described from and are currently recognized in Arizona (Hoffmeister 1986). Hoffmeister (1986) treats *P. amplus ammodytes* as a synonym of *P. a. cineris*, while Hall (1981) recognizes *P. a. ammodytes* as a separate subspecies. The Heritage Data Management System (HDMS) follows Hoffmeister's treatment.

DESCRIPTION: A small **subspecies** of *Perognathus amplus* characterized by short body and small skull that is relatively broad interorbitally; tail relatively long. Color variable, blackish for those in cinder soil around Wupatki; paler for those elsewhere (Hoffmeister 1986). White or faintly buffy below. Skin of ears black-pigmented. A stripe of black hairs extends from tip of nose to base of vibrissae. They have a nearly unicolor dark tail. Hoffmeister (1986) reports mean body length of 60-73 mm and mean hind foot length of 21.5-24.1 mm. For the **species**, tail is more than 3/4 lengths of head and body. The length is 4 7/8 - 6 3/4 inches (123-170 mm); tail 2 7/8 - 3 3/4 in (72-95 mm); hind foot 5/8 - 7/8 in (17-22 mm). (Whitaker 1996). Burt (1976) reports that for the species, head and body 2 4/5 - 3 in (71-76 mm); tail 3 - 3 4/5 in (76-97 mm); wt 3/7 - 1/2 oz (12-14 g).

AIDS TO IDENTIFICATION: Smaller body and skull, smaller zygomatic breadth, shorter hind feet, and relatively greater depth of skull than *P. a. pergracilis*. *P. a. amplus* has a larger body, and a pale color that is variable from pale pinkish buff to dark buff. *P. a. taylori* is the smallest subspecies of *P. amplus*, characterized by a short body and tail, short hind feet, and a pinkish buff color. (Hoffmeister 1986).

ILLUSTRATIONS: Black and White photo (Hoffmeister 1986: 264, figure 5.133).

Color photo (Whitaker, Jr. 1996: plate 65).

Color photo of species (Wilson 1999)

TOTAL RANGE: Arizona: From Echo Cliffs, at the north, southward, east to Colorado River to the Little Colorado River, south of Wupatki National Monument.

RANGE WITHIN ARIZONA: See "Total Range"

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: A solitary rodent, that is most active at night, but may occasionally forage during the daytime. When temperatures cool in autumn, Arizona pocket mice retreat to their burrows, remaining inactive until temperatures warm again in the spring. While in the burrow, their body temperatures cool and their metabolic rate slows, an energy-saving strategy that may account for a lifespan-up to ten years in captivity. This torpor is not true hibernation, however, because individuals arouse from time to time to eat stored seeds. For the species the size of the population peak fluctuates considerably from year to year, depending on the amount of precipitation the previous winter, therefore, presumably, the availability of seeds. This correlation with precipitation suggests that food is what limits populations of the Arizona pocket mouse, either because it limits the number of young that females can produce, or because it determines survival probability, or both.

REPRODUCTION: For the full species, males emerge from winter inactivity before females do in anticipation of breeding season which in late February or early March. During this season the mice emit a distinctive odor reminiscent of stale movie theatre popcorn, perhaps as a chemical signal of sexual competence. The young are born in late April to early May; average litter size is 1-5, with a mean of 3.25. (Hoffmeister 1986). Whitaker (1996) reports litter size of 1-7 (average 3-5).

FOOD HABITS: Arizona pocket mice feed extensively, almost exclusively, on seeds. For example creosote bush, *Pectacarya*, heronbill, and plantain. May occasionally consume insects and green vegetation. The animals apparently find the seeds by digging at random in the sand. They transport the seeds in external fur-lined cheek pouches to a storage area in the burrow that they defend vigorously against intruders. Judging from the behavior of individuals in captivity, Arizona pocket mice manage their seed storage carefully, moving them around frequently within the burrow. Not all parts of the burrow system are equally humid, so this movement may optimize the free water content of seeds or reduce their spoilage.

HABITAT: For the species: found in various types of desert scrub habitats (greasewood, rabbitbrush, creosote bush, cactus, mesquite, palo verde, etc.). Also along scattered scrub oak in some areas. (Hoffmeister 1986). Sleeps and rears young in underground burrows (NatureServe 2001). Sign includes small burrow openings with piles of sand, usually under a plant.

ELEVATION: Between 3,900 and 5,420 feet (1190-1653 m).

PLANT COMMUNITY: Cactus, Creosote, Rabbitbrush, Palo Verde, Mesquite, Greasewood, sometimes juniper.

POPULATION TRENDS: *P. a. cineris* is geographically isolated from other subspecies (Hoffmeister 1986). Trends are not well known.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: SC (USDI, FWS 1996)
[Category 2 USDI, FWS 1985]
STATE STATUS: None
OTHER STATUS: Forest Service Sensitive (USDA, FS Region
3 1999)
Group 4 (NNDFW, NESL 2005)

MANAGEMENT FACTORS: Unknown

PROTECTIVE MEASURES TAKEN: Unknown

SUGGESTED PROJECTS: Surveys need to be performed to determine the status of this subspecies as well as life history.

LAND MANAGEMENT/OWNERSHIP: BIA - Navajo Nation; NPS - Wupatki National Monument; USFS - Coconino National Forest; Private.

SOURCES OF FURTHER INFORMATION

REFERENCES:

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Wilson, D. E. & S. Ruff. 1999. The Smithsonian Book of North American Mammals. Smithsonian Institution Press, Washington. Pp: 495-496.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

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ADDITIONAL INFORMATION:

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